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Indirect detection of spectroscopically unobservable components of chemical exchange by NOESY 2D NMR

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Abstract

A new method for detection of intermediates in chemical exchange is suggested. It is found that the effective exchange rate constant determined from NOESY 2D NMR spectrum depends on the mixing time in the NOESY pulse sequence. The true exchange rates and relative population of the intermediates can be appreciated from this dependence. As follows from estimations, this method is applicable to detect intermediates with relative population up to 0.1% and is also useful to detect the components of exchange hidden in overlapping spectra. © 1993 Springer.

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